Title of Partnership/Project: NASA's GSFC Earth and Space Science K-12 Investigations Project

Name of Principal Investigator: Dr. Robert Gabrys, Chief GSFC Education Office

# Statement of Purpose/goals of partnerships/project

# The Purpose of the Project:

- 1. To establish a network of teachers who will be trained and work within their school districts to encourage the use of Internet-based products among their colleagues, and participate in pilot testing and providing feedback through an electronic format for the improvement of the investigation.
- 2. Establish an electronic feedback system on-line.
- 3. Pilot test investigations electronically.

### **Goals/Objectives for the Past Quarter:**

- 1. To finalize the on-line electronic feedback system accessible through the GSFC education homepage with questions for piloting. See: <a href="http://education.gsfc.nasa.gov">http://education.gsfc.nasa.gov</a>
- 2. To pilot test the evaluation questions feedback system with actual teachers in the field.
- 3. To complete putting investigations in fully edited versions on-line.

### What Have We Accomplished?

- 1. The full structure of the system is on-line through the GSFC homepage.
- 2. A limited number of teachers were invited to review the material and utilize the feedback system. During this quarter that occurred with usage by over 3,000 unique I.P. addresses.
- 3. Begin building partnerships with the Maryland Business Roundtable for Education to work with science teachers and school library media specialists in accessing the system and being trained on its use.
- 4. Develop plans for working with earth science teachers working on a new earth system science course to be implemented in 24 classrooms to be able to utilize the investigations.

# **Good News/Challenges**

- 1. Response from small number of teachers informally using the investigations and providing feedback has been positive.
- 2. Anne Arundel County Schools in Maryland have now created a partnership with us and the Earth scientist community and we will be collaborating on the training of 24 teachers and implementing a support system to them beginning in the Summer, 2000.
- 3. The amount of work to get investigations developed by classroom teacher "web-ready" is much more time consuming that originally thought, as we reported earlier, but the Maryland Business Roundtable for Education and Chamber of Commerce Foundation has agreed to provide direct support to science teachers through a technology initiative to develop innovative staff development and training in conjunction with the Maryland State Department of Education School Library Media Branch.
- 4. Challenge: While we have been successful in getting some 3,000 unique IP addresses involved, that has produced very few people who voluntarily provide feedback through the formal structure.

# **Early Lessons Learned**

We are trying to link our efforts to areas of deficiency as noted through standardized State science test subscores, to see if it will help us motivate teachers to want to use the material. The standards and testing movements have clearly made teachers conscious of the question: "Will this improve our scores?" The stress this puts on the system will be important to monitor.

Getting teachers to go to the site and even use the material does not result in a willingness to provide feedback. An incentive structure would appear to be a crucial component of the total plan.